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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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09/943,203

08/30/2001

Per Ligander

031941-092

8513

27045

7590

12/27/2004

ERICSSON INC.  
6300 LEGACY DRIVE  
M/S EVR C11  
PLANO, TX 75024

EXAMINER

CHAMBLISS, ALONZO

ART UNIT

PAPER NUMBER

2814

DATE MAILED: 12/27/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/943,203

Applicant(s)

LIGANDER ET AL.

Examiner

Alonzo Chambliss

Art Unit

2814

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 25 August 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 37, 40-47 and 50-53 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 37, 40-47 and 50-53 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 August 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

### **DETAILED ACTION**

1. The amendment filed on 8/25/04 has been fully considered and made of record in the instant application.

### ***Response to Arguments***

2. Applicant's arguments filed 8/25/04 have been fully considered but they are not persuasive.

Applicant alleges that Takahira fails to disclose an adhesive layer. This is deemed to be unpersuasive because Takahira discloses plastic material 5 that serves as an adhesive layer 5 (i.e. a material used to bond two or more solids so that they act or can be used as a single piece) (see col. 5 lines 51-60 and col. 6 lines 1-11; Fig. 1). The material is the plastic, which bonds two solids the interface carrier to the support carrier. There the non-final action is maintained and this action is made **final**.

### ***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 37, 40, 42-47, and 50-52, insofar as definite, are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Takahira et al. (EP 720123).

With respect to Claim 37, 40, and 42, Takahira teaches applying at least one layer of sequentially processed tracks 3 on a first side of an interface carrier 1, wherein the second side of the interface carrier 1 being an interface side of the encapsulated circuit board arrangement. Applying the plastic material serves as an adhesive layer 5 using offset printing technology on top of the last applied sequentially processed layer 3 and the support carrier 2 (see Fig. 1). Joining a support carrier 2 to the adhesive layer 5, wherein the adhesive layer being intermediate to and coupling the interface carrier and the support carrier. The carrier 2 forming the protective cover on the second side of the encapsulated circuit board arrangement (see col. 5 lines 51-59 and col. 6 lines 1-30; Figs. 1 and 2).

With respect to Claim 43-46, Takahira teaches wherein the support carrier 2 (i.e. which is inherent that carrier has some level of rigidity but has bendability based on the composition of the PET material) is at least a part of a cover housing or enclosure in which the encapsulated circuit board arrangement is mounted (see Fig. 1).

With respect to Claim 47, Takahira teaches wherein at least one layer of tracks 3, 104a, 104b, 108, 109 comprises connection circuitry (col. 10 lines 30-55 and col. 12 lines 25-37; Fig. 1).

With respect to Claims 50-52, Takahira teaches wherein the interface layer of the interface carrier 105, 106, 111 having at least one via 105a that is solid when filled with a conductive resin 107 (see Figs. 14-17). It is inherent that the interface layer 105, 106, 111 is bendable based on the composition of the PET material.

***Claim Rejections - 35 USC § 103***

15. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

16. Claims 41 and 53, insofar as definite, are rejected under 35 U.S.C. 103(a) as being unpatentable over Takahira et al. (EP 720123) as applied to claims 37 and 40 above, and further in view of Shimoda et al. (U.S. 6,645,830) and Barlow et al. (U.S. 4,225,408).

With respect to Claim 41, Takahira discloses wherein tracks comprises the step of applying a adhesive 106 of at least one of the at least one layer. Takahira fails to explicitly disclose applying an acrylate as a dielectric adhesive. However, Shimoda discloses utilizing an adhesive made of acrylate as a dielectric adhesive (see col. 14 lines 50-53). Thus, Takahira and Shimoda have substantially the same environment of

an adhesive utilized to attach two structural elements together. Therefore, it would have been obvious to one skilled in the art at the time of the invention to incorporate an acrylate dielectric adhesive with the process Takahira, since the acrylate is reliable adhesive for connecting structural elements as taught by Shimoda.

With respect to Claim 53, it is well known in the semiconductor industry that PET can be substituted for a polyimide since both materials are thermoplastic materials as evident by Barlow et al. (see col. 3 lines 21-24).

The prior art made of record and not relied upon is cited primarily to show the process of the instant invention.

### ***Conclusion***

1. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

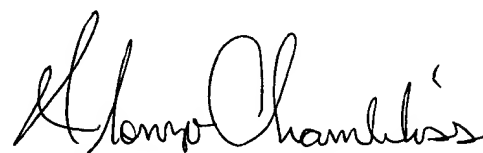
A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning the communication or earlier communications from the examiner should be directed to Alonzo Chambliss whose telephone number is (571) 272-1927.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308-7956

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system Status information for published applications may be obtained from either Private PMR or Public PMR. Status information for unpublished applications is available through Private PMR only. For more information about the PMR system see <http://pair-dkect.uspto.gov>. Should you have questions on access to the Private PMR system contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free) or [EBC\\_Support@uspto.gov](mailto:EBC_Support@uspto.gov).

AC/December 17, 2004

A handwritten signature in black ink, appearing to read 'Alonzo Chambliss', is positioned above the printed name and title.

Alonzo Chambliss  
Primary Patent Examiner  
Art Unit 2814